SLOVENSKI STANDARD

SIST EN 60512-5-1:2003

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Connectors for electronic equipment - Tests and measurements - Part 5-1: Current-carrying capacity tests - Test 5a: Temperature rise (IEC 60512-5-1:2002)

ICS 31.220.10

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EUROPEAN STANDARD **EN 60512-5-1**

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English version

Connectors for electronic equipment - Tests and measurements Part 5-1: Current-carrying capacity tests - Test 5a: Temperature rise

(IEC 60512-5-1:2002)

Connecteurs pour équipements électroniques - Essais et mesures Partie 5-1: Essais de courant limite - Essai 5a: Echauffement (CEI 60512-5-1:2002)

Steckverbinder für elektronische Einrichtungen - Mess- und Prüfverfahren Teil 5-1: Prüfungen der Strombelastbarkeit - Prüfung 5a: Temperaturerhöhung (IEC 60512-5-1:2002)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 60512-5-1:2002 E

Foreword

The text of document 48B/1136/FDIS, future edition 1 of IEC 60512-5-1, prepared by SC 48B, Connectors, of IEC TC 48, Electromechanical components and mechanical structures for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60512-5-1 on 2002-04-01.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-01-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-04-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60512-5-1:2002 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60512-1-1	- [1)]	Connectors for electronic equipment - Tests and measurements Part 1-1: General examination - Test 1a: Visual examination	EN 60512-1-1	2002 [2)]

1) Undated reference.

2) Valid edition at date of issue.

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Connectors for electronic equipment – Tests and measurements –

Part 5-1: Current-carrying capacity tests – Test 5a: Temperature rise

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Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 5-1: Current-carrying capacity tests – Test 5a: Temperature rise

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60512-5-1 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This standard cancels and replaces test 5a of IEC 60512-3, issued in 1976, and constitutes a technical revision.

The text of this standard is based on the following documents:

FDIS	Report on voting
48B/1136/FDIS	48B/1187/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended

CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 5-1: Current-carrying capacity tests – Test 5a: Temperature rise

1 General

1.1 Scope and object

This part of IEC 60512, when required by the detail specification, is used for testing electromechanical components within the scope of IEC technical committee 48. This test may also be used for similar devices when specified in a detail specification.

The object of this test is to detail a standard test method to assess the ability of a component to carry its specified current, at room temperature, without exceeding a specified temperature rise.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60512. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60512 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60512-1-1, *Connectors for electronic equipment – Tests and measurements – Part 1-1: General examination – Test 1a: Visual examination*

2 Preparation of the specimen

Three specimens shall be used, unless otherwise specified. The specimens are to be wired with a minimum length of wire, as specified in table 1, and mounted, as specified in the detail specification.

The manufacturer's recommended, or industry standards, wiring method and tooling shall be used, unless otherwise stated in the detail specification.

The specimens shall be fitted with a temperature-sensing device, whose thermal mass shall not significantly affect the temperature measurement. This temperature-sensing device shall be mounted as near as practicable to the hottest part of the contact system, unless otherwise specified. A non-contact temperature measurement device may be used.

NOTE Care must be taken to protect the specimen under test from draughts or other artificial cooling. This may be achieved either by the use of an enclosure or by ensuring that the laboratory is draught-free.

If d.c. current is used, avoid voltage bias influence on thermocouple by executing the test with reverse current.